

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior version and listings of claims in the application. Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer and/or disavowal to the claimed and/or disclosed subject matter, and the applicant and/or assignee reserves the right to claim this subject matter and/or other disclosed subject matter in a continuing application.

Listing of Claims:

1. (Currently amended) A method for permitting communications between a first communication node and a second communication node, the first communication node and the second communication node each adapted to communicate in a different variant of a protocol or a different protocol, the method comprising:
for each communication between the first communication node and the second communication node:
 - receiving a signaling message from said first communication node;
 - querying a first Communications Node Database for information about said first communication node in response to said signaling message;
 - querying a second Communications Node Database for information about said second communication node in response to said signaling message;
 - making a decision whether said signaling message needs to be modified; and
 - modifying said signaling message before it is transmitted to said second node in response to said decision.
2. (Original) The method of claim 1 wherein said signaling message is a request to connect, modify, or disconnect communications.
3. (Original) The method of claim 1 wherein said communications comprise: Voice over IP; video over IP; instant messaging; access to conferencing bridges connecting multiple communication nodes; and access to communications servers for deposit or retrieval of stored

communications.

4. (Original) The method of claim 1 wherein said signaling message comprises a registration request; an authentication request; a connection request, a request to modify a connection, and a request to terminate a connection.

5. (Original) The method of claim 1 wherein said step of modifying comprises changing at least one of: a source address; a destination address; a signaling protocol; a signaling method; adding a field; deleting a field; a syntax; a punctuation; a spelling; and said communications signals.

6. (Original) The method of claim 1 wherein said first database and said second database are a single database.

7. (Original) The method of claim 1 further comprising a step of grouping communication nodes into categories, and wherein each category requires a different protocol remediation; and each category uses different signaling addresses for sending messages to a signaling mediation agent.

8. (Original) The method of claim 7 wherein said signaling addresses comprise a port number.

9. (Original) The method of claim 7 wherein said categories are based on a specified set of signaling messages requiring remediation.

10. (Currently amended) A method for authorizing communications between a first communication node and a second communication node, the first communication node and the second communication node each adapted to communicate in a different variant of a protocol or a different protocol, the method comprising:

for each communication between the first communication node and the second communication node:

receiving a registration request message from said first communication node;
querying a first database to authenticate an identity of said first communication node;
querying a second database to determine which communication services said first communication node is authorized to use;
querying a third database for signaling addresses of registration nodes for said authorized communication services;
querying a fourth database for additional information about said registration nodes;
making a decision whether said registration request message needs to be modified in response to querying said first database, querying said second database, querying said third database, and querying said fourth database; and
modifying said registration request message before it is transmitted to said registration node in response to said decision.

11. (Original) The method of claim 10 wherein said first database, said second database, said third database, and said fourth database are a single database.

12. (Original) The method of claim 10 wherein said communications comprise: Voice over IP; video over IP; instant messaging; access to conferencing bridges connecting multiple communication nodes; and access to communications servers for deposit or retrieval of stored communications

13. (Original) The method of claim 10 wherein said communication services comprise: access to cellular networks; access to a PSTN; access to conferencing services; and access to messaging services.

14. (Withdrawn) A method for permitting communications between a first communications node attached to a first communications network, a second communications node attached to a second communications network, and a network address translation device on an interconnection

path between said first communications network and said second communications network, comprising:

receiving, by a signaling agent, a signaling message having an original source address and an original destination address from one of said first and second communications nodes on said respective first and second communications network, a request for communications with an other of said first and second communications nodes on said respective first and second communications networks;

determining, by said signaling agent, said original source address and a translated source address of said signaling message transmitted to said other of said first and second communications nodes by said network address translation device;

inserting, by said signaling agent, in said signaling message from said one of said first and second communications nodes, an external source address for receiving signaling messages from said other of said first and second communications nodes to create a modified message; and

forwarding, by said signaling agent, said modified message to said other of said first and second communications nodes.

15. (Withdrawn) The method of claim 14 further comprising learning how said network address translation device translates said original source address into said translated source address for messages and making changes to said translated source address provided in said modified message.

16. (Withdrawn) A method for permitting communications between a first communications node attached to a first communications network, a second communications node attached to a second communications network, and a network address translation device and a firewall device on an interconnection path between said first communications network and said second communications network, comprising:

receiving, by a signaling agent, a signaling message having a destination address, from one of said first and second communications nodes on a respective first and second communications network, a request for communications with an other of said first and second communications nodes on said respective first and second communications networks;

determining, by said signaling agent, an identity of said one of said first and second communications nodes from said signaling message;

querying, by said signaling agent, a database to determine an internal IP address and a port number for signaling one of said first and second communications nodes;

modifying, by said signaling agent, said destination address of said signaling message;
and

transmitting, by said signaling agent, said message to said other of said first and second communications nodes.

17. (Withdrawn) A method for permitting communications between a first communications node attached to a first communications network, a second communications node attached to a second communications network, and a network address translation device and a firewall device on an interconnection path between said first communications network and said second communications network, comprising:

receiving, by a signaling agent, a signaling message from one of said first and second communication nodes on a respective first and second communications network, a request for communications with said other of said first and second communications nodes on said respective first and second communications networks;

sending, by said signaling agent, a request message to said network address translation device and said Firewall device to open a port on said firewall device to allow communications between said first node and said second node to traverse said network address translation device and said firewall device;

opening, by said network address translation device and said firewall, said port on said firewall and establishing a mapping between an internal address of said port and an external address of said port, and providing said mapping information to said signaling agent;

determining, by said signaling agent, said mapping established by said network address translation device of said external address of said communications to said internal address;

storing, by said signaling agent, said mapping information in memory; and

modifying, by said signaling agent, any address information in said signaling messages for said communications so that said one of said first and second communications nodes, learns

said external address for sending communications to said other of said first and second communications nodes and said one of said first and second communications nodes learns said internal address to use as said source address for sending communications to said other of said first and second communications nodes.

18. (Withdrawn) The method of claim 17 wherein said step of opening uses UPnP.

19. (Currently amended) A method for permitting communications between a first communication node and a second communication node, the first communication node and the second communication node each adapted to communicate in a different variant of a protocol or a different protocol, the method comprising:

for each communication between the first communication node and the second communication node:

receiving a signaling message from said first communication node;

making a decision whether said signaling message needs to be modified in respect to an originating address used by said first communication node to send said signaling messages; and

in response to said decision, modifying said signaling message, transmitting said signaling message to said second node.

20. (Original) The method of claim 19 wherein said originating address comprises an IP address and port number

21. (Original) The method of claim 19 wherein said communications comprise: Voice over IP; video over IP; instant messaging; access to conferencing bridges connecting multiple communication nodes; and access to communications servers for deposit or retrieval of stored communications.

22. (Original) The method of claim 19 wherein said signaling messages comprise registration requests; authentication requests; connection request, requests to modify a connection, requests to terminate a connection.

23. (Original) The method of claim 19 wherein modifying comprises changing at least one of: source address; destination address; changing signaling protocol; changing signaling methods; adding fields; deleting fields; modifying syntax; changing punctuation; changing spelling; altering said communications signals such that said first communication node can communicate without errors or failures with said second communication node.

24. (Currently amended) A method for permitting communications between a first communication node and a second communication node, the first communication node and the second communication node each adapted to communicate in a different variant of a protocol or a different protocol, the method comprising:

for each communication between the first communication node and the second communication node:

receiving, by an agent, signaling messages from said first communication node;
modifying, by said agent, said messages based on a signaling address said agent uses to receive said signaling messages;

wherein said first communication node is configured to use a destination signaling address for sending messages to a signaling agent; and wherein said destination signaling address is configured on said first node based on a protocol variant used by said first communication node.

25. (Currently amended) A method for communicating between a first communication node and a second communication node, the first communication node and the second communication node each adapted to communicate in a different variant of a protocol or a different protocol, the method comprising:

for each communication between the first communication node and the second communication node:

receiving, by an agent, signaling messages from said first communication node;
modifying, by said agent, said messages and transmitting, by said agent, signaling messages to said second communication node.

26. (Original) The method of claim 25 wherein said modifying said messages is based on a signaling address used to receive messages from said first communication node.

27. (Original) The method of claim 25 wherein said modifying said messages is based on said signaling address used to transmit messages to said second communication node.